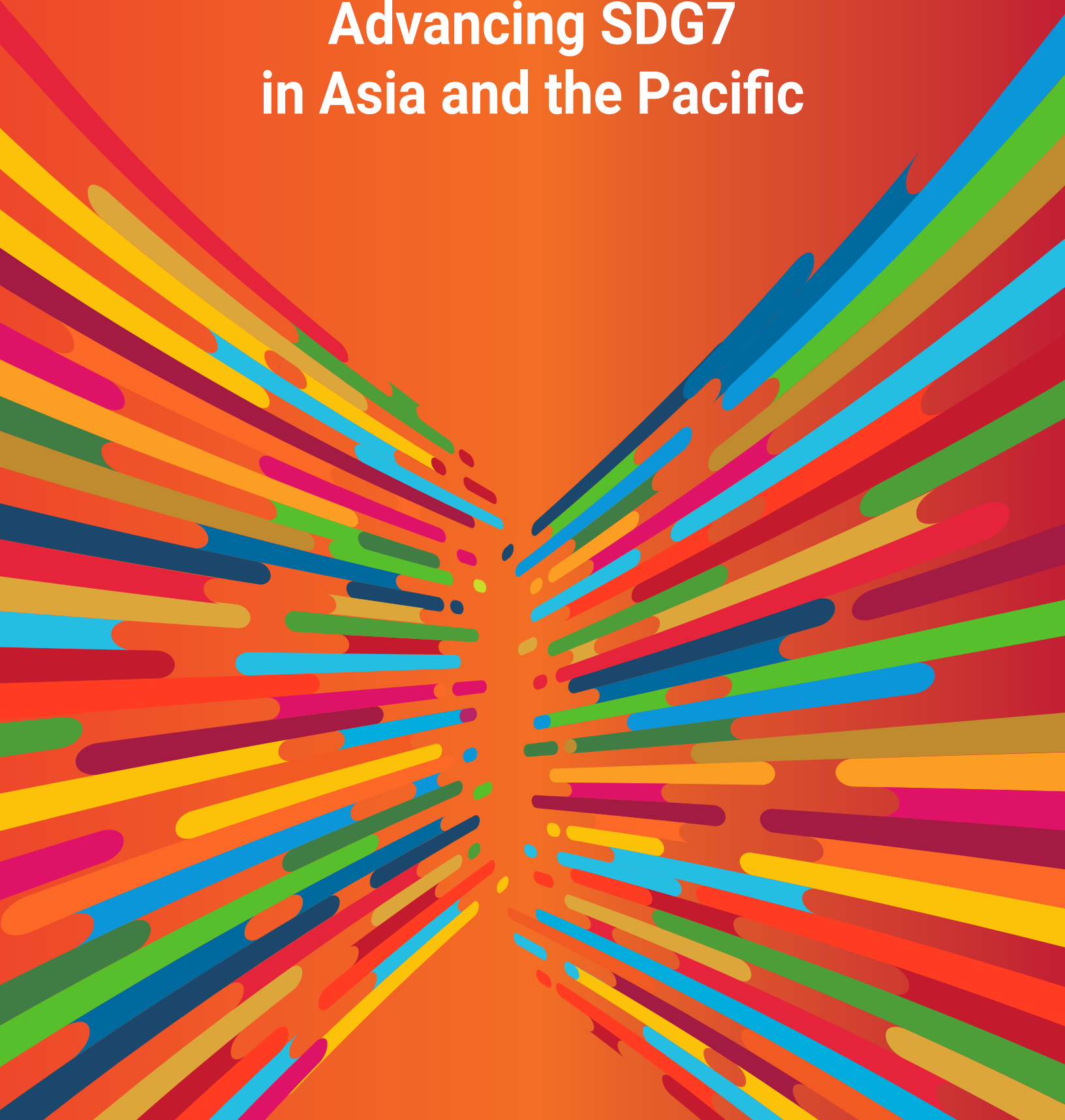




POLICY BRIEFS IN SUPPORT OF THE UN HIGH-LEVEL POLITICAL FORUM 2023

Advancing SDG7 in Asia and the Pacific



SDG7 POLICY BRIEFS IN SUPPORT OF THE UN HLPF 2023

This document is part of a series of policy briefs compiled by the multistakeholder SDG7 Technical Advisory Group (SDG7 TAG) in support of the review of SDG7 at the High-level Political Forum (HLPF) 2023. Convened by UN DESA, the SDG7 TAG is composed of over 40 experts from governments, UN organizations, international organizations and other stakeholders. The HLPF is the central United Nations platform for the follow-up and review of the 2030 Agenda for Sustainable Development and the Sustainable Development Goals (SDGs) at the global level. More information on the SDG7 TAG, including previous editions of the annual SDG7 Policy Briefs, is available at <https://sdgs.un.org/sdg7tag>

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Advancing SDG7 in Asia and the Pacific

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International Energy Agency (IEA)

International Renewable Energy Agency (IRENA)

KEY MESSAGES

The Asia-Pacific region is a key player in global energy consumption and a major source of greenhouse gas (GHG) emissions, accounting for over half of both, worldwide. As around three-quarters of those GHG emissions come from energy, achieving Sustainable Development Goal 7 (SDG7) is vital in addressing the climate change crisis.

Energy is also intertwined with many other SDGs, including poverty reduction, food security, health, education, gender equality and water access. Indeed, energy is linked to two-thirds of the 169 SDG targets, underlining the crucial role it plays in sustainable development. Expanding access to clean energy in line with SDG7, for example, can deliver improved health outcomes, create jobs and reduce poverty and inequality.

The latest data shows, however, that despite significant progress, the pace of transition to clean energy is uneven and incremental across the Asia and the Pacific region, highlighting the need for scaled-up technical and financial support.

A just energy transition is also critical, with disadvantaged economies requiring particular focus to ensure all nations benefit from clean and sustainable energy. This is especially important as some countries lack the necessary policies, capacities or financing mechanisms to support accelerated progress. This may leave vulnerable economies behind in the energy transition process.

A just transition is also critical in ensuring that all individuals in the communities of a nation have an equal opportunity to access the energy services and technologies that they require to meet their needs. To this end, regional cooperation can play a crucial role in facilitating commitments and efforts to advance SDG7 in the region. This is particularly so, given current geopolitical shifts and the energy market turmoil of 2022 and 2023. With recent setbacks challenging many economies, increased and targeted support is needed to ensure a sustainable energy future for all.

The following priority actions are therefore recommended for the Asia and the Pacific region over the next three years:

- Increase access to electricity in underserved areas by investing in off-grid and mini-grid solutions that utilize renewable energy sources to reach the last mile.

- Implement policies and regulations that support the deployment of clean cooking technologies, such as electric cookstoves, liquefied petroleum gas (LPG) and sustainable bioenergy, reducing reliance on traditional biomass fuels.
- Encourage the adoption of energy-efficient appliances and lighting systems through consumer education campaigns and financial incentives.
- Promote the development of local renewable energy markets by providing policy and regulatory support and improving access to financing, with a focus on the heat and transport sector.
- Strengthen regional cooperation and knowledge-sharing to enhance energy security and increase the use of renewable energy sources.
- Strengthen national and regional grid infrastructure to improve the reliability of modern energy services and accommodate larger shares of variable renewable energy.
- Enhance the availability and quality of energy data and information to support evidence-based decision-making and monitoring of progress towards SDG7.

In addition, the following priority actions should be taken towards 2030:

- Achieve universal access to affordable, reliable, and modern energy services, with a focus on electrification and clean cooking.
- Increase the share of renewable energy in the energy mix, aiming for at least 50 per cent by 2030. This should be done through the deployment of large-scale renewable energy projects and the integration of distributed renewable energy sources into the grid.
- Implement energy efficiency measures in all sectors, with a particular focus on industry, building, transportation and agriculture.
- Phase out unabated coal power and inefficient subsidies for fossil fuels. Redirect those resources towards investments in renewable energy and energy efficiency.
- Develop innovative financing mechanisms, such as green bonds, to support the scaling up of renewable energy and energy efficiency, as well as the phasing out of coal projects.

PROGRESS TOWARDS ACHIEVING SDG7

SDG7.1: Ensure universal access to electricity and clean cooking solutions

Recent progress

Access to electricity

Between 2016 and 2021, almost 380 million people gained access to electricity in the Asia and the Pacific region. Over this period, the region's population increased by 180 million, leading to a rise in the rate of electrification from 94.0 per cent to 98.6 per cent.

There is a small disparity between electricity access rates in urban and rural areas, but the gap is closing and universal access seems to be within reach. In 2021, urban access rates reached 99.8 per cent, while rates in rural areas reached 97.7 per cent.

However, there are a number of challenges with tracking electrification progress, particularly given limitations in household survey data coverage. The binary view of electricity access adopted by SDG7 can obscure important considerations such as affordability, quality, reliability and ultimately, the sustainability of electricity supply.

At the subregional level, access rates continued to trend upward, though the rate for the Pacific remained relatively flat. Nationally, progress was varied, with the greatest average annual growth rates for the period recorded in Afghanistan, Bhutan, Cambodia and Nepal, each with between 4.3 per cent and 10.2 per cent annual gains.

Growing electrification rates can be attributed to significant government efforts to expand and upgrade national power grids while reaching decentralized households and community systems in hard-to-reach areas. This was often done with the help of the private sector.

Yet, although significant progress has been made in electrification, approximately 67 million people remain without access to electricity, across the region. The problem is especially acute in low- and lower-middle-income countries and many rural areas. In addition, last-mile electrification remains a challenge, as does the quality and reliability of the existing electricity supply needed to support productive and sustainable livelihoods.

Priority targets

Reaching end-of-the-line and off-grid households with affordable, adequate and reliable electricity remains the greatest challenge to the achievement of universal access across the region.

Both the long-term sustainable operation of rural decentralized systems and the provision of energy access to more than the lowest-tier households have proved difficult in some contexts.

Although public, private and international actors have introduced numerous business models and technical approaches, regular maintenance activities are more challenging. Moreover, the bundling of system operations across regions is financially inefficient because of the absence of service and equipment standards. Without ongoing financial support, some off-grid communities will remain vulnerable to the activities of small operators and suppliers.

Clean cooking

Between 2010 and 2021, the regional rate of access to clean cooking rose from 51.1 per cent to 73.9 per cent.

That meant that in 2021, almost 1.2 billion people – nearly one quarter of the population of the Asia and the Pacific region – were without access to clean cooking.

Therefore, as of that year, the region was not on track to meet this SDG7 target of universal access to clean cooking by 2030. This was especially the case in rural areas, where the access rate was 57 per cent.

This is despite the fact that progress in expanding access to clean cooking has been quite significant over the last decade. The annual rate of increase in access between 2010 and 2021 was 120 million people – a figure three times the size of population growth, which was 41 million.

Yet, the average annual increase in access was only 1 per cent over the decade in question.

With significant growth in population expected in the immediate term, by 2030, hundreds of millions of people will still be reliant on polluting and unhealthy cooking fuels and technologies.

A number of factors lie behind slow progress with the transition to clean cooking. There is a significant obstacle in affordability, with the COVID-19 pandemic also impacting communities across the region, shifting hundreds of thousands back to harmful cooking practices as a result of the economic difficulties it caused.

Some promising and innovative approaches have been slowly emerging, however, as possible solutions. In India, for example, ambitious, subsidized LPG cooking schemes have been introduced. Meanwhile, other countries, such as Bhutan and Indonesia, are embracing the shift from gas to electric cooking, which is becoming a more viable option. This shift is being supported by electricity subsidies and the provision of free electric induction stoves, encouraging households to switch away from kerosene.

Priority targets

To bridge the gap and achieve the SDG7 target, radically increased investment in the promotion and adoption of clean cooking solutions is required.

BOX 1. The gender impacts of SDG7

The ongoing transformation of the energy sector also has implications for global efforts to address gender inequalities, with gender and energy intersecting in two main ways.

First, energy access, or the lack of access, can further widen gender inequalities. This is most visible in the Asia and the Pacific region in lack of access to clean cooking. Some 1.2 billion people, or about 20 per cent of the region's population, remained without access to clean cooking fuels and technologies in 2021. While lack of access to electricity has gender impacts, particularly by depriving women of economic opportunities, clean cooking stands out by virtue of its impact on both health and gender.

As cooking has a gendered dimension in the region, lack of access to clean fuels for cooking has a greater impact on women than men, as it is women who suffer greater exposure to pollution while preparing meals.

Second, gender disparities can be reinforced through employment in the energy sector, where gender gaps are pronounced. Indeed, not only are fewer women employed in the energy sector than men, but they are also paid less.

According to the IEA, in 2018 women made up just 16 per cent of the traditional energy sector workforce, worldwide, despite comprising 39 per cent of the global workforce, overall. Salaries in the energy sector were also reported to be 16 per cent lower for women than for men.

These figures reflect the dominance of the incumbent fossil fuel sector, which has traditionally been less gender diverse. As countries transition to new energy paradigms dominated by clean energy, how they create greater opportunities for women to participate in these industries will be key to addressing this challenge. While this is important for operational level roles, it is even more important for management and decision-making roles. The benefits from this approach stem not only from the possibility it creates for tapping into innovative and diverse thinking, but also from the promotion of better social engagement in public debates over the energy transition.

The investment and policy attention devoted to clean cooking lags significantly behind the necessary level, while at the current rate of improvement, the target of universal access by 2030 will not be reached. Clean cooking should therefore attract a higher level of policy commitment – and when gender impacts are factored in, the urgency for this becomes even greater. New technologies, such as electric cooking, along with schemes to attract innovative climate finance into the sector are some of the ways in which progress can be made. In order to achieve a successful energy transition driven by human-centred innovation, incorporating a gender strategy into national energy transition plans and greater women's participation in the energy workforce is essential.

Such investments may take various forms, including government subsidies and financial incentives that make clean cooking solutions more affordable and accessible to low-income households. Other initiatives could include public-private partnerships (PPPs) to leverage private sector expertise and finance clean cooking solutions. In addition, investments in the research and development of new technologies and fuels that are affordable, scalable, and environmentally sustainable, should be a focus for investment, as should increased international development assistance and donor funding to support clean cooking initiatives in developing countries.

SDG7.2 Substantially increasing the share of renewable energy in the global energy mix

Recent progress

Climate change and the growing affordability of renewables are driving many countries to focus their national energy development plans on renewable energy.

Yet, although renewable energy installations are increasing in number, they still constitute a relatively small share of total energy consumption in many countries, due to the overall growth in energy demand. In 2020, modern renewable energy accounted for 12.5 per cent of total final energy consumption (TFEC) in the region. This pushed the overall share of renewables – including both modern and traditional forms – to its highest level so far, at 19.1 per cent.

The region is also undergoing a shift towards a more diverse mix of modern renewable energy sources. Since 2020, the combined installed capacity of wind and solar has surpassed that of hydropower, with solar energy in particular experiencing rapid growth. In 2021, the Asia and the Pacific region's solar installed capacity reached 485 gigawatts (GW), representing a significant increase – approximately 19 per cent – on the previous year.

Renewable energy auctions have been instrumental in driving the adoption of wind and solar power, leading to increased investment and reduced costs in the region, which has become a global leader in this field.

A significant gap remains, however, between the progress made by the region's wealthier nations and its developing countries, despite an impressive six-fold growth in renewable generating capacity since 2010. Those countries with a high income or upper-middle income have witnessed a remarkable three-fold surge in renewable energy installations, while those with a low income or lower-middle income have made only minimal progress, on a per capita basis.

Furthermore, the slowest increase observed continues to be in the heat and transport sectors.

Priority targets

Despite some progress towards cleaner energy systems, there is therefore still a long way to go. The current rate of progress is not enough to meet the growing demand for renewable energy. Though modern renewables have become a cost effective option on a global basis, the lack of relevant policies to support their rollout as well as the lack of technical and financial capacity, are significant barriers for many countries to achieve the necessary level of renewable energy deployment.

To overcome these challenges, there needs to be increased technical and financial support on a larger scale. Additionally, it is crucial to prioritize the needs of developing economies in the transition to cleaner and sustainable energy. This is essential to ensure that all nations can enjoy the benefits of clean energy and that the transition is fair and equitable.

BOX 2. Relevant financing mechanisms for energy transition

Major financing deals, such as Just Energy Transition Partnerships (JETPs), have the potential to significantly increase renewable energy deployment and energy efficiency, while also helping phase out coal powered plants. Similarly, the Association of Southeast Asian Nations (ASEAN) Catalytic Green Finance Facility can provide crucial support to de-risk green projects and mobilize public and private financing.

Other promising developments include the Energy Transition Mechanism and Climate Investment Funds, backed by the Asian Development Bank. These aim to incentivize the private sector to support early phase-out of coal power plants in India, Indonesia, and the Philippines, with potential expansion to other countries in the region. Furthermore, the Regional Comprehensive Economic Partnership, a free trade agreement between 10 southeast Asian economies and Australia, China, Japan, New Zealand and the Republic of Korea, which came into effect in 2022

SDG7.3: Doubling the global rate of improvement in energy efficiency

Recent progress

The annual improvement rate of primary energy intensity in Asia Pacific slowed to 1.3 per cent between 2015 and 2020, compared to the 2.8 per cent level seen during the 2010–2015 period.

Unfortunately, at these levels, the pace of improvement in energy intensity in the region is not keeping up with the 2010–2030 global target rate of 2.6 per cent. In fact, from 2020 to 2030, the region now needs to accelerate its annual energy intensity improvement rate to 3.2 per cent if it is to meet the SDG7.3 target.

Indeed, energy intensity in the region's emerging economies continues to be relatively high compared to its developed countries. Many smaller countries are not achieving sufficient improvement, and this means that further policy attention in this area is required.

Priority targets

Achieving the global SDG7.3 target will require significant scaling up of energy efficiency policies and investments. There are several challenges to achieving this, however. These include low prioritization, limited identification of opportunities, insufficient policy and regulatory support, financing hurdles and inadequate awareness of the benefits of energy efficiency.

It is crucial to integrate energy efficiency into national and regional development planning to ensure proper consideration and allocation of resources. China serves as a prime regional example of how setting ambitious energy performance requirements for large-scale industrial facilities can aid in meeting efficiency targets. Through its 2021–2025 Five-Year Development Plan, China aims to reduce energy consumption per unit of gross domestic product (GDP) by 13.5 per cent, compared to the 2020 level.

To promote energy efficiency and reduce energy demand, there is also a need to raise awareness of the benefits of high-efficiency choices. This can be done in various ways, such as adequate labelling, consumer awareness campaigns and incentives. In order to accomplish this, governments must obtain better data across the range of end-uses to increase minimum energy performance standards (MEPS) on products. Indeed, it is essential to introduce, tighten and enforce national MEPS for appliances, as this prevents the dumping of inefficient technologies on less-developed energy efficiency markets. Harmonizing regional MEPS and standardizing labelling, as is being done in the ASEAN subregion, can offer benefits throughout the supply chain. It can lower manufacturing costs, simplify compliance for officials and open up cross-border markets that can take advantage of economies of scale, contributing to affordability.

In the building sector, the introduction of energy efficiency building codes is vital in ensuring good building energy performance and supporting the affordability of energy services through reduced energy demand. Passive design strategies for buildings and urban areas are an emerging focus area within building regulations and urban planning. Such strategies also support the reduction of the building sector's energy consumption and GHG emissions.

POLICY IMPLICATIONS AND RECOMMENDATIONS

The Asia-Pacific region continues to make notable efforts towards achieving the SDG7 targets, particularly in terms of increasing access to electricity.

Yet, the countries of the region are still falling short on achieving many other aspects of this SDG. Greater momentum is required to close the gap in universal access to electricity and to promote clean cooking fuels and technologies. It is also required to accelerate the deployment of renewable energy and to increase its share in the national energy mix. Furthermore, greater momentum is also needed in scaling up energy efficiency and electrification in end uses.

BOX 3. Development of the SDG7 road map in Asia and the Pacific

In 2018, the UNESCAP publication “Energy Transition Pathways for the 2030 Agenda in Asia and the Pacific” highlighted that under the policy settings in place at the time, the region would not achieve all the SDG7 targets by 2030.

UNESCAP has been using an integrated energy planning approach in its support for regional countries as they work toward the ambitious SDG7 targets. This is because the achievement of those goals requires consideration of the synergies between the constituent elements of the SDG. Those elements are: increasing access to modern energy services, improving energy efficiency, reducing emissions from the energy sector and increasing the share of renewable energy. Constraints, such as resource availability and emissions reduction targets under the Nationally Determined Contributions (NDCs), need to be considered.

In this regard, the 2018 UNESCAP report mentioned above suggested that national SDG7 implementation road maps could play a transformational role in the region. They would do this by providing guidance to policymakers on the policy and technology options available that would help them achieve the SDG7 and NDC targets.

With the agreement and support of its member states, UNESCAP then developed a framework, called the National Expert SDG Tool for Energy Planning (NEXSTEP), to support the development of national SDG7 road maps. This framework enables policymakers to make informed decisions that support the achievement of the SDG7 and emissions reduction targets.

UNESCAP has now partnered with 16 countries in the region to produce national SDG7 road maps. The NEXSTEP work has also been expanded to the subnational level to create sustainable energy transition plans through partnerships with six cities and three provinces. These plans articulate energy strategies for these cities and provinces that enable them to leverage their fiscal and policy influence in order to contribute to the SDG7 targets at their national level.

Some common findings have emerged across the different analyses, even though the countries that have developed SDG7 road maps are quite diverse. These include the discovery that clean cooking solutions using electric cooking are an increasingly viable option. In addition, refocusing efforts on energy efficiency through measures such as minimum performance standards for appliances, were also found essential to put energy efficiency gains back on track. In the power sector, phasing down the use of coal in favour of renewables and energy efficiency both emerged as common recommendations for countries which have significant levels of coal fired power generation in their energy mix.

More information, including completed road map reports at the national and subnational levels, is available at www.unescap.org/projects/nexstep.

It is therefore recommended that the following actions be given priority:

Improve enabling environments for clean energy development

Accelerated clean energy development hinges on the capacity of governments to signal their long-term commitment to transformation through ambitious energy goals and targets. With regard to NDCs from the region, renewable energy generation is the most frequently mentioned energy-related climate mitigation measure, followed by multisectoral energy efficiency. Then follow efficiency in transport and of buildings, the electrification of transport and the shift to low- or zero-carbon fuels.

Governments must ensure policy coherence and predictability in order to attract investment. Good governance, especially with regard to political stability, rule of law and the effectiveness of governing bodies, has a substantial impact on risk perceptions and investment protection. Engagement within regional and international bodies is essential to enhancing knowledge and domestic capacity for policymaking.

Comprehensive national planning that includes the power sector, the electrification of end uses, alternative fuels and demand-side measures is needed. Integrating higher shares of renewables requires larger, more responsive and flexible grid systems. Government support is needed to establish robust supply chains for clean cooking fuels and technologies. It is also needed to encourage PPPs to ensure that clean cooking energy and technologies are accessible in a reliable, affordable and convenient manner.

Mobilize investment and finance

In meeting the SDG7 targets, the private sector is likely to play a major role in project development and provide the majority of investments. Governments should reform market structures and ownership rules in a way that enhances private participation and increases competition. Private participation can be greatly enhanced through the design of effective regulatory frameworks to support PPPs in infrastructure development. Governments also need to consider enabling private investment to play a role in sectors that are traditionally dominated by public spending. Significant investments are needed in the modernization and expansion of national power grids, as well as in complementary technologies such as smart grids and storage systems.

International capital markets represent potentially large pools of low cost capital for clean energy projects. Sustainable funding instruments are attracting a great deal of attention from investors looking to green their portfolios, with sustainable debt issuance now valued at well over US\$ 1 trillion globally. The ability of many developing Asia and the Pacific region economies to tap into these sources remains limited, however. Improved domestic capacity and more robust and better harmonized frameworks for sustainable finance are required. These should include standards with regard to instruments and taxonomies to help guide capital allocation.

Use connectivity as a tool for supporting the energy transition

Energy connectivity is a key tool for enabling the secure, affordable and sustainable development of power systems. Connectivity supports the integration of a variety of renewable energy resources and enables access to a more diverse and less costly set of resources. This strategy is widely recognized, including by the Member States of UNESCAP, which in 2021 endorsed the Regional Road Map on Power System Connectivity: Promoting Cross-border Electricity Connectivity for Sustainable Development.

Governments should take steps to increase initiatives supporting regional cooperation on connectivity. This should be done by creating harmonized regulations and operational policies that allow for the integration of power systems. To that end, governments should ensure that there are appropriate subregional and regional institutions to support the development and harmonization of regulatory frameworks. They should also ensure that regulators have mandates to participate in regional initiatives.

Ensure a just energy transition

Clean energy transitions are marked by structural changes in which jobs in legacy industries are replaced by those in new sectors. In several countries in the Asia and the Pacific region, industries related to fossil fuels have emerged as major sources of employment. Some communities have developed exclusively around these industries, such as coal mining. In moving away from fossil fuels, efforts are required to ensure transitions are just and people-centred, with coordinated, long-term engagement for affected workers and communities, both within and across countries and regions.

Expanding jobs along the value chain of clean energy – from technology manufacturing to project development – requires a comprehensive approach to the deployment and integration of clean energy technologies, industrial policies, education, and skills training. It also requires community and regional economic development measures. It is key to adopt new holistic approaches such as the water-energy-food-land nexus to advance energy and food security, while also contributing to job creation, gender equality, and climate resilience and adaptation throughout just energy transition.



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